

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 005363-3249	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2005/007651	International filing date (day/month/year) 10/03/2005	(Earliest) Priority Date (day/month/year) 10/03/2004
Applicant TRUSTEES PG TUFTS COLLEGE TUFTS UNIVERSITY		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 04 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).3. ☐ Unity of invention is lacking (see Box III).4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

SYNERGISTIC EFFECT OF COMPOSITIONS COMPRISING CAROTENOIDS SELECTED FROM LUTEIN, BETA-CAROTENE AND LYCOPENE

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☒ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2005/007651

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K31/01 A61K31/015 A61K31/07 A23L1/30 A61P39/06
A61P43/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K A61L A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, EMBASE, BIOSIS, MEDLINE, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 2005/027950 A (RAY AND TERRY'S HEALTH PRODUCTS, INC; GROSSMAN, TERRY; KURZWEIL, RAYMO) 31 March 2005 (2005-03-31) page P, lines 21-30; claim 1	1, 3-8, 13-16, 19, 20
X	WO 01/17519 A (COGNIS DEUTSCHLAND GMBH; GAERTNER, CHRISTINE; STAHL, WILHELM; HEINRICH) 15 March 2001 (2001-03-15) claims	1-20
X	EP 0 981 969 A (BASF AKTIENGESSELLSCHAFT) 1 March 2000 (2000-03-01) claims	1-6
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

20 May 2005

Date of mailing of the international search report

31/05/2005

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2005/007651

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>STAHL W ET AL: "Carotenoid mixtures protect multilamellar liposomes against oxidative damage: Synergistic effects of lycopene and lutein" FEBS LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 427, no. 2, 8 May 1998 (1998-05-08), pages 305-308, XP002082207 ISSN: 0014-5793 page 307, left-hand column, line 14 - right-hand column, line 9</p> <p>-----</p>	1-20
X	<p>"LUTEIN LYCOPENE CAROTENE COMPLEX VEGICAPS" 'Online! 3 March 1998 (1998-03-03), XP002125651 Retrieved from the Internet: URL:www.solgar.com/online_reference/beta_carotene/lutein.html> the whole document</p> <p>-----</p>	1-7
X	<p>DE 101 09 798 A1 (AVENTIS PHARMA DEUTSCHLAND GMBH) 12 September 2002 (2002-09-12) claims 1-24</p> <p>-----</p>	1-20
P,X	<p>WO 2004/108869 A (CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS; GARCIA MARTOS, JOSE M) 16 December 2004 (2004-12-16) claims</p> <p>-----</p>	6,7
X	<p>DATABASE WPI Section Ch, Week 200260 Derwent Publications Ltd., London, GB; Class B07, AN 2002-560763 XP002230968 & JP 2002 128651 A (KOSE KK) 9 May 2002 (2002-05-09) abstract</p> <p>-----</p>	1-20

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2005/007651

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2005027950 A	31-03-2005	WO 2005027950 A1	31-03-2005
WO 0117519 A	15-03-2001	DE 19942774 A1	15-03-2001
		AT 254912 T	15-12-2003
		AU 772825 B2	06-05-2004
		AU 7281300 A	10-04-2001
		DE 50004582 D1	08-01-2004
		DK 1210073 T3	05-04-2004
		WO 0117519 A1	15-03-2001
		EP 1210073 A1	05-06-2002
		ES 2211597 T3	16-07-2004
		JP 2003508485 T	04-03-2003
		US 2005031557 A1	10-02-2005
EP 0981969 A	01-03-2000	DE 19838636 A1	02-03-2000
		CA 2280629 A1	26-02-2000
		CN 1251745 A ,C	03-05-2000
		EP 0981969 A1	01-03-2000
		JP 2000086505 A	28-03-2000
		KR 2000017541 A	25-03-2000
		US 2003031706 A1	13-02-2003
		US 6261598 B1	17-07-2001
		US 2001019724 A1	06-09-2001
DE 10109798 A1	12-09-2002	AU 2193402 A	24-06-2002
		WO 0247493 A2	20-06-2002
		EP 1355539 A2	29-10-2003
		JP 2004515508 T	27-05-2004
		US 2002146463 A1	10-10-2002
WO 2004108869 A	16-12-2004	ES 2221575 A1	16-12-2004
		WO 2004108869 A1	16-12-2004
JP 2002128651 A	09-05-2002	NONE	

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